



Certificate Programs at the HHSDC Training Center

z/OS Programmer Certificate

The Program

The HHSDC Training Center is offering the updated **z/OS Programmer Certificate**. The program consists of a core curriculum plus optional advanced levels. Students may earn the basic and advanced certificates by completing the following program requirements at the HHSDC Training Center:

z/OS Programmer – All four core classes
z/OS Batch Expert – All core classes plus **Basic VSAM for Programmers**, **z/OS Application Dump Reading**, and **z/OS Job Control Language – Advanced Concepts**
z/OS Online Expert – All core classes plus the 2 CICS classes

Core Classes:

- **Introduction to z/OS**
- **Getting Started with TSO/ISPF**
- **Getting Started with JCL & Utilities**
- Any 1 of the following programming classes:
 - **Basic COBOL Programming (5 days)**
 - **Basic COBOL Programming for New Programmers (10 days)**
 - **Basic Assembler Programming (5 days)**

Electives:

- **Basic VSAM for Programmers**
- **z/OS Application Dump Reading**
- **z/OS Job Control Language – Advanced Concepts**
- **Introduction to CICS**
- **Basic CICS Command Level Programming**

How to Obtain a Certificate

While you are on-site attending the final course in your program, notify the HHSDC Training Office that you are about to complete the program. A special certificate will be prepared and awarded to you upon completion of the final class.

Tuition Discount

When you earn a certificate, your organization will receive a 10% discount off the total tuition for all classes in that level. The total discount for a level will be taken in the final class of that level. To qualify for the discount, you must complete the first level within an 18-month period and each succeeding level within 12 months after the previous level.

The discount for this updated certificate program is effective for students who complete a program level after July 1, 2004 and in accordance with the timeframes listed above.

These courses may also be taken as stand-alone classes. Some prerequisites apply.

How Will This Program Benefit My Organization?

Please see Page 4 for a description of the benefits attained by your organization if you complete this program.



HEALTH & HUMAN SERVICES DATA CENTER

HHSDC Training Center

9323 Tech Center Drive, Ste. 100

Sacramento, CA 95826

(916) 739-7502

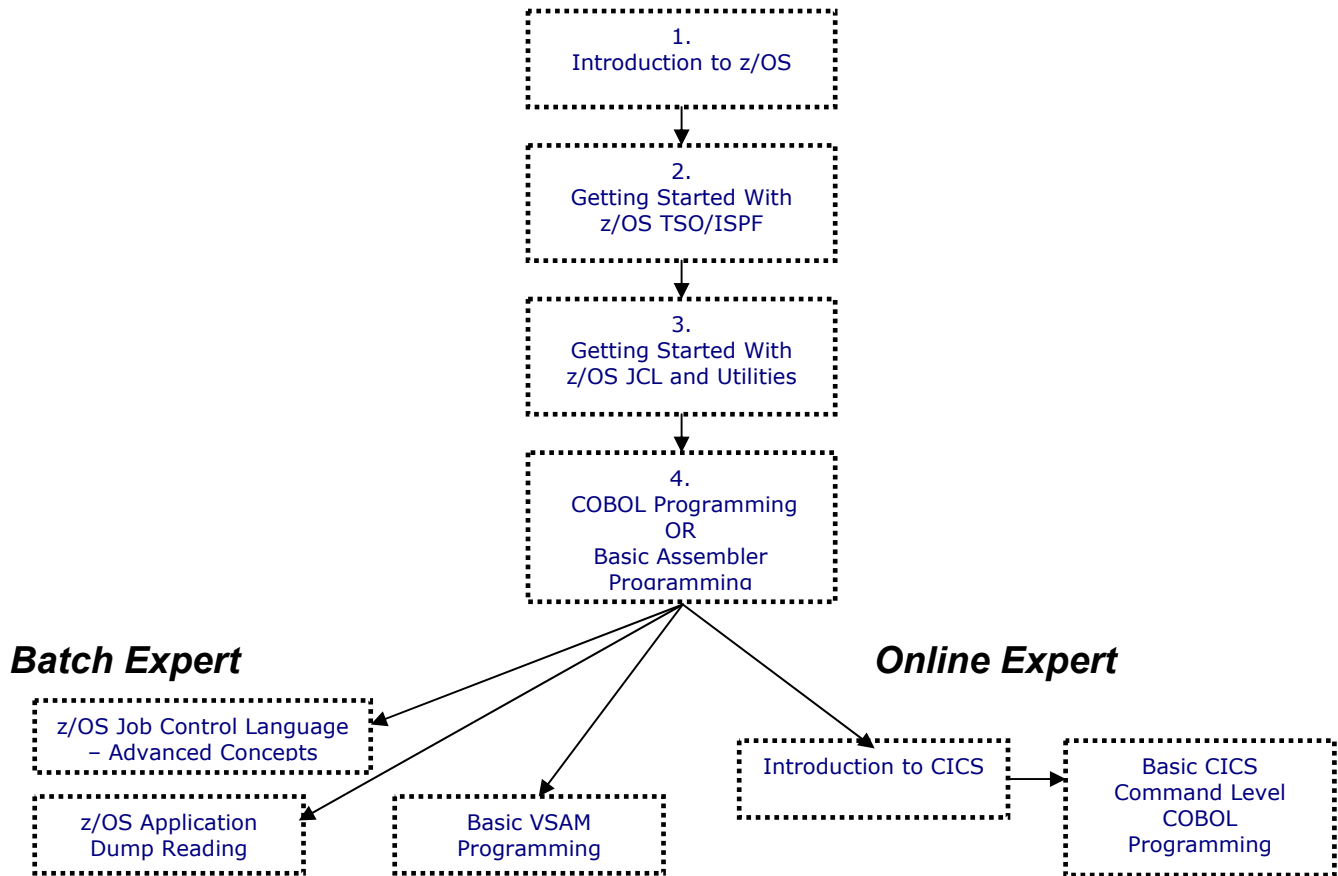
FAX: (916) 739-7779

TDD: (916) 454-7226



z/OS Programmer Certificate Course Schedule

Recommended Sequence



Schedule of Classes – July 2004 through June 2005

Course Title	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Introduction to z/OS			23-24			7-8			10-11			16-17
Getting Started with z/OS TSO/ISPF			27-28			9-10			14-15			20-21
Getting Started with z/OS JCL & Utilities			29-	1		13-15			16-18			22-24
Basic COBOL Programming (5 days)				25-29								
Basic COBOL Programming for New Programmers (10 days)										18-29		
Basic Assembler Programming							24-28					
Introduction to CICS				19							17	
Basic CICS Command Level COBOL Programming					1-5						23-27	
z/OS Job Control Language – Advanced Concepts					29-30							9-10
z/OS Application Dump Reading							20-21					
Basic VSAM Programming											18-20	

z/OS Programmer Certificate Syllabus

COURSE DESCRIPTIONS

These courses may also be taken individually without working towards a certificate. Some prerequisites apply. If you have any questions please call us at (916) 739-7502, TDD (916) 454-7226

Tuition shown is before discount

Core Classes

Introduction to z/OS – 2 days \$450

This course is designed to give newcomers to z/OS an overview of the hardware and software available in the Enterprise Server environment.

Getting Started with z/OS TSO/ISPF – 2 days \$450

This course presents all of the commonly used facilities of the TSO/ISPF product in the z/OS environment, such as data set browsing and editing, data set creation and manipulation, batch job submission and tracking, and review of batch job output.

Getting Started with z/OS JCL and Utilities – 3 days \$675

This course presents all of the basic JCL statements and discusses the most commonly used parameters on each. Several of the regularly used IBM utility programs are explained and examples of their use in JCL are presented.

Take one of the following three programming classes, depending on your level of experience as a programmer:

Basic COBOL Programming for New Programmers – 10 days \$1,950

Designed for students with no prior programming experience, this course presents the basic concepts of the COBOL programming language, including program structure, statements, arithmetic, data manipulation and file processing.

Basic COBOL Programming – 5 days \$975

Designed for students with experience coding in another programming language, this course presents the basic concepts of the COBOL programming language, including program structure, statements, arithmetic, data manipulation and file processing.

Basic Assembler Programming – 5 days \$1,075

This course presents the most frequently used facilities of the z/OS operating system environment that are accessible to the assembler programmer. The course covers the creation, assembly, and

execution of assembler programs and discusses the efficient use of z/OS programming resources.

Batch Expert Classes

z/OS Application Dump Reading – 2 days \$450

This course shows students the basics of application program debugging by using the various types of dumps produced by z/OS. The complete ABEND process is explored, together with information on the location of the program's problem using z/OS control blocks.

Basic VSAM Programming – 3 days \$675

This course presents the basic concepts of VSAM programming, including KSDS, ESDS, and RRDS access plus access through alternate indexes. Participant will learn to use the IDCAMS utility to manipulate VSAM data sets.

z/OS Job Control Language – Advanced Concepts – 2 days \$450

This course presents the advanced coding techniques for creating efficient JCL in the z/OS environment. Included in this course is an introduction to the new JCL functions in the z/OS operating system using System Managed Storage (SMS). Efficiency techniques for coding advanced JCL are presented that ensures the optimum use of JCL and system resources.

Online Expert Classes

Introduction to CICS – 1 day \$225

This course is designed to give newcomers to z/OS an overview of how CICS handles online, transaction-based applications.

Basic CICS Command Level COBOL Programming – 5 days \$925

This course presents the basic concepts of online programming using the CICS command level interface. Subjects covered include terminal input/output, program control, file processing, and error determination and resolution.

Organizational Benefits for Earning this Certificate

This program will benefit your organization by teaching a business expert or novice programmer the z/OS coding techniques that will allow you to:

- Support and maintain your existing legacy systems
- Improve the quality of new and existing COBOL-based computer programs and JCL
- Reduce development time for new or changed COBOL VSAM or COBOL CICS programs
- Revitalize existing JCL-based job streams and improve job performance and turnaround
- Empower business experts to leverage their business knowledge into technical skills

This unique program, taught by Train-Right at the HHSDC Training Center, will teach your business experts and novice programmers to

become skilled technical developers and to understand the specifics of coding, tuning and maintaining high-quality COBOL-based z/OS computer applications. In other words this program teaches a non-technical businessperson how to become a developer of enterprise-level computer systems and how to optimize those systems to run in a z/OS environment.

Specifically, these techniques assure quality — and cost savings — by teaching the developer how to efficiently analyze program requirements, how to design, code, and test a high-quality COBOL-VSAM or COBOL-CICS program, and how to select efficient processing options for the z/OS JCL environment.

Train-Right instructors have been teaching COBOL, VSAM, CICS, TSO/ISPF and JCL for many years, based on their real-world experience. Their extensive breadth and depth of knowledge in the z/OS arena makes them an excellent training provider for this certificate program.

REGISTRATION INFORMATION

Satisfaction guaranteed or your money back

To enroll in a class at HHSDC, please have your training coordinator call the HHSDC Training Center Registration Line at 739-7502. We will take all enrollment and billing information over the phone, then send the training coordinator written confirmation and a map to HHSDC for each student.

Cancellations of enrolled students must be submitted in writing via e-mail to training@hhsdc.ca.gov by the training coordinator. To avoid charges for late cancellations, the note must be received by **TEN (10) WORKING DAYS PRIOR TO THE FIRST DAY OF CLASS**. The full course fee will be charged for any cancellations received after the 10-working day deadline. Verbal cancellation notifications will not be accepted. Substitutions may be made at any time via telephone call.

The HHSDC Training Center is located at 9323 Tech Center Drive, Suite 100, in Sacramento. Tech Center Drive is located one block south of the intersection of Folsom Blvd. and Mayhew Road, between Bradshaw and Watt. **The class will be in session each day from 8:15 A.M. to approximately 4:30 P.M.** Plenty of free parking is available.